

36. A commissioning unit in accordance with claim 34, wherein said stack-of-articles support has a pair of stack-of-articles clamping plates with a stack-of-articles pick-up and with a transversely adjustable longitudinal individual article clamping plate for elastically clamping a picked-up stack of articles in a transverse direction of the stack.

37. A commissioning unit in accordance with claim 34, wherein said stack-of-articles support is held in an essentially vertical position in (each operating position) and has (a doubly sloped angle sheet iron) wherein (a said) stack of articles picked up in the support is laterally fixed in (the root of the angle) by the force of gravity and the stack of article^s is supported on (the bottom side) either on said individual article ejector or on said stack-of-articles holding-up device that can be pushed up.

38. A commissioning unit in accordance with claim 34, wherein said article-handling device has both a stack-of-articles support, for filling (the said) (automatic) commissioning unit, and for removing and transporting a stack of articles from and to storage areas, and an article-handling unit, which is movable in space, for the removal of articles stack by stack and for the transport of articles stack by stack from an acceptance region or from and to a supply bay, wherein said article-handling unit and said stack-of-articles support can be aligned and positioned in relation to one another in a vertical position and said stack of articles can be picked up on said article-handling unit and can be transferred into (the) said stack-of-articles support by an adjustable transverse stack-of-articles pusher.

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39. A commissioning unit in accordance with claim 38, wherein said article-handling unit of said bay-storage and retrieval unit has a bottom-side stack-of-articles pick-up, an adjustable longitudinal stack-of-articles pusher, an adjustable transverse stack-of-articles pusher, and an adjustable longitudinal stack-of-articles clamping plate, which has a row of spring-tensioned fingers and is located in parallel to and opposite said stack-of-articles pick-up and presses in a clamped state a stack of articles picked up directly against said stack-of-articles pick-up in a transverse direction of the stack by the longitudinal stack-of-articles clamping plate.

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40. A commissioning unit in accordance with claim 34, wherein said bay-storage and retrieval unit can be displaced via a guide or rail system from and to at least one supply bay and can be positioned at a selected lateral end of a shaft of said supply bay, wherein at least one single stack of articles to be handled is or can be arranged in each selected shaft and the stack of articles reaches an aligned article pick-up of the article-handling unit by displacement in the direction of the stack, or conversely, it reaches the selected shaft from the article pick-up, wherein the guide or rail system also has switches.

41. A commissioning unit in accordance with claim 34, wherein the supply bay is a higher-level supply bay, which is associated with said automatic commissioning unit and is located in the vicinity of said article bay of the automatic commissioning unit.

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42. A commissioning unit in accordance with claim 38, wherein the supply bay is a

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buffer associated with (the said acceptance department) located in the vicinity of an unpacking station, at which said stacks of articles are unpacked from a collective box and are put together.

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43. A commissioning unit in accordance with claim 42, wherein said unpacked stacks of articles are put together on a stack-of-articles stacker plate, which has a shape of a part of at least one bay level of the supply bay, said bay-storage and retrieval unit being displaceable for taking over an article by displacement also to the stack-of-articles stacker plate via a rail or guide system and being positionable at this stack-of-articles stacker plate.

44. A commissioning unit in accordance with claim 43, wherein said stack-of-articles stacker plate is also displaceable, especially displaceable on a conveyor belt or on a chute and/or rotatably around a said vertical axis by preferably 90° or 180° for positioning to the bay-storage and retrieval unit.

45. A commissioning unit in accordance with claim 44, wherein a hand or foot switch is provided for adjusting said stack-of-articles stacker plate.

46. A commissioning unit in accordance with claim 43, wherein an automatic unpacking unit with a gripping arm is provided, which grasps a preferably horizontal stack of articles from an opened collective box and deposits it on said stack-of-articles stacker plate.

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47. A commissioning unit in accordance with claim 40, wherein the supply bay has angle sheet irons arranged next to one another in one or more planes arranged one on top of another.

48. A commissioning unit in accordance with claim 47, wherein said angle sheet iron is doubly sloped and forms a chute that has a rectangular cross section and is oblique in the longitudinal direction¹¹²⁽²⁾, wherein the root of the angle is located at the lowest point in each cross section over the length of the chute and the two surfaces of the legs of the angle are stop faces for a picked-up stack of articles and, furthermore, a detachable, preferably depressible article stop is provided at the lowest end of the chute.

49. A commissioning unit in accordance with claim 48, wherein the slope of the chute is approx. 20° in the longitudinal direction¹¹²⁽²⁾ and the slope of the base of the chute is approx. 15° in the transverse direction¹¹²⁽²⁾.

50. A commissioning unit in accordance with claim 48, wherein a stack of articles picked up in the chute has a longitudinal fixing aid, which presses the stack of articles against the article stop.

51. A commissioning unit in accordance with claim 50, wherein said longitudinal fixing aid is a rolling cart.

52. A commissioning unit in accordance with claim 50, wherein the longitudinal fixing aid is a longitudinally adjustable article stop.

53. A commissioning unit in accordance with claim 50, wherein said longitudinal fixing aid is a spring-pretensioned article stop.

54. A commissioning unit in accordance with claim 47, wherein the supply bay is a double bay, which is arranged back to back.

55. A commissioning unit in accordance with claim 34, wherein the article-handling unit of the bay-storage and retrieval unit has a said coupling pin, which can be caused to engage a corresponding recess acting as a centering aid at a selected shaft of a supply bay.



56. A commissioning unit in accordance with claim 34, wherein the article-handling unit has a small roller stop, which can be caused to engage the stack-of-articles stop of a shaft for releasing or depressing the stack-of-articles stop, wherein the stop of the article-handling unit may also be the adjustable longitudinal stack-of-articles pusher itself.


57. A commissioning unit in accordance with claim 47, wherein the said stack-of-articles pick-up of the said bay-storage and retrieval unit, the shaft and the angle sheet iron of the said higher-level supply bay, a buffer and a stack-of-articles stacker plate at an acceptance

5 region [?] have the same designs in terms of length, width, wherein said higher-level supply bay
and/or said buffer may also have different sizes, especially in width.

58. A commissioning unit in accordance with claim 38, wherein said article-handling unit is fastened via a pivot axis on a carriage transversely displaceable on a transverse rail with a slope in the depth of the shaft or in the longitudinal direction of the shaft of the supply bay, especially approx. 20°, wherein said transverse rail is rigidly or telescopically fastened on a vertically displaceable lifting carriage of said bay-storage and retrieval unit.

59. A commissioning unit in accordance with claim 36, wherein said article-handling device is divided into two parts and has a separate, vertically adjustable stack-of-articles pick-up unit with a plurality of angle sheet irons of a type, position and size of said stack-of-articles pick-up and of the supply bay, which has at least one ¹¹²⁰² said adjustable second longitudinal stack-of-articles pusher of its own, wherein a plurality of stacks of articles can be conveyed by the stack-of-articles pick-up unit from a buffer or from the stack-of-articles pick-up to a higher-level supply bay and loaded and removed, and a separate, vertically adjustable article bay loading unit, which is in turn divided into two parts and has, on the one hand, a vertically adjustable individual stack-of-articles pick-up with the said longitudinal stack-of-articles pusher and with another transverse stack-of-articles pusher and, on the other hand, a gripping unit or stack-of-articles support, which is movable in space, with a bottom-side stack-of-articles pick-up, a longitudinal stack-of-articles clamping plate with an angle stop and with an adjustable

15  transverse stack-of-articles pusher as well as with the said individual article ejector, wherein a single selected stack of articles can be conveyed by said article bay loading unit from the supply bay said higher-level supply bay, said buffer  or from said stack-of-articles stacker plate of the acceptance region to the automatic commissioning unit and be loaded there individually into a selected article shaft of said automatic commissioning unit.

5  60. A commissioning unit in accordance with claim 36, wherein for loading the stack of articles into said automatic commissioning unit, said stack of articles can be removed by said individual stack-of-articles pick-up from the supply bay in the longitudinal direction of the stack by displacement with said longitudinal stack-of-articles pusher and can be conveyed to said automatic commissioning unit and it can be positioned and individually loaded after transfer or transverse displacement of said stack of articles from said individual stack-of-articles pick-up by said additional transverse stack-of-articles pusher onto said bottom-side stack-of-articles pick-up of said aligned gripping unit or stack-of-articles support and after clamping of the entire stack of articles in said transverse direction of the stack by said longitudinal clamping plate having spring-tensioned fingers at said selected article shaft of said automatic commissioning unit by moving the gripping unit.

10 61. A commissioning unit in accordance with claim 59, wherein said gripping unit or stack-of-articles support is fastened via a said axis of rotation to a vertically adjustable lifting carriage, which is in turn vertically displaceable on a vertical bar of said bay-storage and

retrieval unit, which said vertical bar is articulated on the bottom side around at least one axis.

sub C) 62. A commissioning unit in accordance with claim 59, wherein said vertical bar has a shorter length than said vertical bar on which said individual stack-of-articles pick-up and said stack-of-articles pick-up unit are vertically displaceable. *ungram.*

5 63. A commissioning unit in accordance with claim 34, wherein at least one separate bay-storage and retrieval unit is provided, which is associated with a stack-of-articles stacker plate at an acceptance region, a buffer and/or a higher-level supply bay or can be displaced thereto and can take over or transfer stacks of articles there, wherein the separate bay-storage and retrieval unit has exclusively a stack-of-articles pick-up for a plurality of stacks of articles, (which is associated with said automatic commissioning unit)

5 64. A process for making ready and loading articles in a commissioning unit with at least one automatic commissioning unit, which has at least one said article bay with article shafts, which are arranged next to one another and one on top of another and are sloped against the horizontal and in which articles to be commissioned can be stored, wherein each said article shaft has a means for stopping and dispensing the articles at its lower longitudinal end and can be filled with new articles at its higher longitudinal end on a bay filling side, the process comprising the steps of:

positioning a traveling bay-storage and retrieval unit, which is associated with the

10 article bay, with an article-handling device, which is movable in space, with a stack-of-articles
support positioned in an essentially vertical position of the support with a correspondingly
vertical stack of articles picked up in the support at a selected, higher longitudinal end of a
article shaft on the bay filling side, wherein the lowermost article of the stack of articles of the
support can be pushed into the selected article shaft by a lower individual article ejector
displaceable in the transverse direction of the stack or, as an alternative, a topmost article of a
15 pushed-up, obliquely positioned stack of articles is introduced into the selected article shaft by
the force of gravity or by a upper individual article ejector that is displaceable in the transverse
direction of the stack.

65. A process in accordance with claim 64, wherein the bay-storage and retrieval unit
and especially the stack-of-articles support are used for the transport of articles stack by stack
from the acceptance department and/or from and to supply storage areas.

66. A process in accordance with claim 64, wherein a separate article-handling unit is
used for the transport of articles stack by stack and for the transfer of articles stack by stack
from the acceptance department and/or from and to supply storage areas and is transferred into
an aligned, preferably essentially vertically held stack-of-articles support for filling an automatic
5 commissioning unit with articles piece by piece from the stack of articles.